

25295A

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A ~~filled and wound~~ muffler insert for use in a muffler comprising:
a ~~filled insert comprising at least one pipe and a~~ body of wool-type fibrous material conforming to the shape of a compartment in a tool product, said wool-type product surrounding a portion of said at least one pipe; and
a ~~yarn thread wrapped wound around the body, thereby confining the volume of the body, and secured to an outer portion of said wool-type product.~~
2. (Currently Amended) The ~~filled and wound~~ muffler insert of claim 1, wherein at least one of said at least one pipe(s) comprises the muffler insert includes a perforated pipe.
3. (Currently Amended) The ~~filled and wound~~ muffler insert of claim [1] 2, wherein said ~~filled~~ the insert further comprises includes at least one partition(s) coupled to ~~said at least one the pipe.~~
4. (Currently Amended) The ~~filled and wound~~ muffler insert of claim 3, wherein at least one of said ~~the at least one partitions~~ partition(s) comprises a perforated partition.
5. (Currently Amended) The ~~filled and wound~~ muffler insert of claim 1, wherein ~~said the yarn thread~~ comprises a polymer yarn thread having a tensile strength at room temperature of at least 550 megapascals and having a tensile strength at temperatures greater than about 80 degrees Celsius of at most 50 megapascals.
6. (Currently Amended) The ~~filled and wound~~ muffler insert of claim 5, wherein ~~said the polymer yarn thread~~ is selected from the group consisting of polypropylene yarn thread and modified polyethylene yarn.
7. (Currently Amended) The ~~filled and wound~~ muffler insert of claim 5, wherein ~~said the polymer yarn thread~~ has a fiber diameter of between approximately 0.2 and 1.0 millimeters.
8. (Currently Amended) The ~~filled and wound~~ muffler insert of claim 1, wherein ~~said the yarn thread~~ comprises a steel yarn thread.

25295A

9. (Currently Amended) The ~~filled and wound~~ muffler insert of claim 1, wherein said the wool-type product comprises one or more strands of a continuous strand material.

10. (Currently Amended) The ~~filled and wound~~ muffler insert of claim 9, wherein said the continuous strand material comprises one or more strands each comprising a plurality of glass filaments selected from the group consisting of E-glass filaments and S-glass filaments.

11. (Currently Amended) ~~A filled and wound~~ The muffler insert of claim 1 wherein the muffler insert includes a core material, and wherein the body of wool-type fibrous material surrounds at least a portion of the core material comprising:

~~a filled insert comprising a core material and a wool type product, said wool type product surrounding a portion of said core material; and~~

~~a yarn thread wrapped around an outer portion of said wool type product.~~

Claims 12 - 15 (Canceled)

16. (Currently Amended) A method for forming a ~~filled and wound~~ muffler insert comprising:

~~providing an unfilled muffler insert~~ a tool having one or more compartments;

~~coupling said unfilled muffler insert within a shaped tool, said shaped tool having an upper section and a lower section, said shaped tool and said unfilled muffler insert defining at least one compartment there between;~~

~~introducing a fibrous material within one of said at least one of the compartments~~
~~compartment to form a filled insert~~ wool-type fibrous body;

~~placing said filled insert~~ the tool onto a winding machine, ~~said winding tool defining a center axis;~~

~~moving said upper section of said shaped tool away from said lower section along said center axis to create a gap;~~

~~wrapping a yarn thread around at least a portion of the body to form the muffler insert~~
~~said filled insert exposed within said gap to form the filled and wound muffler insert;~~

~~removing said shaped~~ the tool and ~~the filled and wound muffler insert~~ from said ~~winding tool~~ the winding machine; and

25295A

extracting the ~~filled and wound~~ muffler insert from said ~~the~~ shaped tool.

17. (Currently Amended) The method of claim 16, wherein introducing a fibrous material comprises:

introducing a nozzle of a texturizing device within a fill opening of said ~~the~~ shaped tool; and

introducing one or more strands of a continuous strand material from said ~~the~~ texturizing device through said ~~the~~ nozzle and into said ~~the~~ compartment under vacuum pressure.

18. (Currently Amended) The method of claim 16, wherein wrapping a yarn thread comprises:

coupling said ~~the~~ yarn thread contained on said ~~the~~ winding machine to a gripper ~~located at a position near said gap;~~

rotating a portion of said ~~the~~ winding machine around said ~~the tool~~ filled insert such that said ~~the~~ yarn thread is wound onto said ~~the body of fibrous material to form the muffler insert~~ filled insert; and

cutting said ~~the~~ yarn thread between said ~~the muffler~~ filled insert and said ~~the~~ winding machine.

19. (Currently Amended) The method of claim 18 further comprising affixing said ~~the yarn thread around said~~ to the muffler ~~filled insert~~.

20. (Currently Amended) The method of claim 19, wherein affixing said ~~the~~ yarn thread around said filled to the muffler ~~insert~~ comprises affixing said ~~the end of the yarn~~ to said another portion of said ~~the~~ yarn thread.

21. (Currently Amended) The method of claim 20, wherein affixing said ~~the~~ end comprises ultrasonically welding said ~~the~~ end to said another portion of said ~~the~~ yarn thread.

22. (Currently Amended) The method of claim 20, wherein affixing said ~~the~~ end comprises hot welding said ~~the~~ end to said another portion of said ~~the~~ yarn thread.

25295A

23. (Currently Amended) The method of claim 20, wherein affixing ~~said the~~ yarn ~~thread around said filled to the muffler~~ insert comprises knotting ~~said the~~ end of ~~said the~~ yarn thread to ~~said another portion of said the~~ yarn-thread.

24. (Currently Amended) The method of claim 19, wherein affixing ~~said the~~ yarn ~~thread around said filled to the muffler~~ insert comprises affixing ~~said the~~ end within ~~said fibrous portion the body of fibrous material~~.

25. (Currently Amended) A method for forming ~~an odd-shaped~~ a muffler comprising:

providing an unfilled muffler insert;

coupling a shaped tool around a portion of ~~said the~~ unfilled insert, ~~said the~~ shaped tool having an upper section and a lower section, ~~said the~~ shaped tool and ~~said the~~ unfilled insert defining a at least one compartment there between;

~~forming a filled insert filling the~~ at least one compartment within ~~said shaped tool~~ with a fibrous material such that the material forms a wool-type body within the compartment of the tool;

placing ~~said filled insert the tool~~ onto a winding machine;

moving ~~said the~~ upper section of ~~said the~~ shaped tool away from ~~said the~~ lower section to create a gap;

wrapping and securing a yarn ~~thread~~ around a portion of ~~said filled insert the body of fibrous material~~ exposed within ~~said the~~ gap to form a filled and wound muffler insert;

removing ~~said the~~ shaped tool and ~~said filled and wound the~~ muffler insert from ~~said the~~ winding tool;

extracting ~~said filled and wound the~~ muffler insert from ~~said the~~ shaped tool; and

coupling ~~said filled and wound the~~ muffler insert within a muffler shell.

25295A

26. (Currently Amended) The method of claim 25, wherein forming a ~~filled insert~~ the wool-type body comprises:

introducing a nozzle of a texturizing device within a fill opening of ~~said the shaped~~ tool;

introducing one or more strands of a continuous strand material from ~~said the~~ texturizing device through ~~said the~~ nozzle and into ~~said the~~ compartment under vacuum pressure.

27. (Currently Amended) The method of claim 25, wherein wrapping and securing a yarn thread comprises:

coupling ~~said the~~ yarn thread contained on ~~said the~~ winding machine to ~~said filled insert the body~~ within ~~said the~~ gap;

rotating a portion of ~~said the~~ winding machine around ~~said filled insert the body~~ such that ~~said the~~ yarn thread is wound onto ~~said filled insert the body~~; and

cutting ~~said the~~ yarn thread between ~~said filled insert the body~~ and ~~said the~~ winding machine; and

securing ~~said the~~ yarn thread around ~~said filled insert the body~~.

28. (Currently Amended) The method of claim 27, wherein securing ~~said the~~ yarn thread around ~~said filled insert to the body~~ comprises affixing ~~said the~~ end of the yarn to ~~said another portion of said the~~ yarn thread.

29. (Currently Amended) The method of claim 28, wherein affixing ~~said the~~ end comprises ultrasonically welding ~~said the~~ end to ~~said another portion of said the~~ yarn thread.

30. (Currently Amended) The method of claim 28, wherein affixing ~~said the~~ end comprises hot welding ~~said the~~ end to ~~said another portion of said the~~ yarn thread.

31. (Currently Amended) The method of claim 27, wherein securing ~~said the~~ yarn thread around ~~said the~~ filled insert comprises knotting ~~said the~~ end to ~~said another portion of said the~~ yarn thread.

32. (Currently Amended) The method of claim 25, wherein coupling ~~said filled and wound the~~ muffer insert within a muffer shell comprises:

25295A

providing a muffler shell having a pair of open ends and an interior region;
providing a pair of end pieces;
pressing ~~said filled and wound~~ the muffler insert through ~~said the~~ open end and within ~~said the~~ interior region;
coupling one of ~~said the~~ pair of end pieces to one of ~~said the~~ pair of open ends;
coupling the other of ~~said the~~ pair of end pieces to the other of ~~said the~~ pair of open ends;
sealingly affixing ~~said the~~ one of ~~said the~~ pair of end pieces to ~~said the~~ one of ~~said the~~ pair of open ends; and
sealingly affixing ~~said the~~ other of ~~said the~~ pair of end pieces to ~~said the~~ other of ~~said the~~ pair of open ends.

33. (Currently Amended) The method of claim 25, wherein coupling ~~said filled and wound the~~ muffler insert within a muffler shell comprises:

providing a muffler shell having an interior region and a first end and second end; and
coupling ~~said the~~ muffler shell around ~~said filled and wound the~~ muffler insert such that ~~said filled and wound the~~ muffler insert is substantially contained within ~~said the~~ interior region and such that ~~said the~~ first end substantially abuts ~~said the~~ second end; and
sealingly affixing ~~said the~~ first end to ~~said the~~ second end.

34. (Canceled)

35. (New) The method of claim 16 wherein at least one of the one or more compartments includes a perforated pipe.

36. (New) The method of claim 25 wherein the muffler insert includes a perforated pipe.